

CLAIMS

What is claimed is:

1. A modular power tool comprising:

drive system;

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a housing defining a chamber for said drive system;

a handle defining a through cavity, having a first side and a second side, said first side of said handle engages one of said drive system and said housing and said second side of said handle engages the other of said drive system and said housing; and

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wherein, said drive system, said housing and said handle are adaptable for use in a left and right hand orientation, wherein in said left hand orientation, said housing is mounted on said first side of said handle and in said right hand orientation, said housing is mounted on said second side of said handle.

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2. The modular power tool of claim 1 further including:

a guard coupled to said drive system; and

a shoe mounted to said guard.

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3. The modular power tool of claim 1 wherein said drive system further includes:

a motor; and

a gear case coupled to said motor.

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4. The modular power tool of claim 3, wherein said gear case includes a pair of substantially symmetrical air flow passages which enables said gear case to provide ventilation regardless of orientation.

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5. The modular power tool of claim 4 wherein said air flow passages have substantially symmetrical fins and ribbing.

6. The modular power tool of claim 1 wherein said handle is adaptable to receive a power supply.

7. The modular power tool of claim 1 wherein said handle includes left and right shells.

8. The modular power tool of claim 1 wherein said drive system
5 further includes a flange for coupling to said handle.

9. The modular power tool of claim 1 wherein said housing further includes a flange for coupling to said handle.

10. The modular power tool of claim 1 wherein said housing is symmetrical.

11. The modular power tool of claim 1 wherein said handle, said drive system and said housing are connected by a plurality of common fasteners.

12. A modular power tool comprising:

a motor;

a motor housing defining a chamber for said motor;

a handle including a first side and a second side and defining a
20 through cavity extending from said first side to said second side;

a gear case coupled to said motor;

a guard assembly coupled to said gear case; and

wherein, said handle and said gear case are adaptable for use in a
left and a right hand orientation, wherein in said left hand orientation, said
25 housing is mounted on said first side of said handle and in said right hand orientation, said housing is mounted on said second side of said handle.

13. The modular power tool of claim 12 wherein said guard assembly includes a guard and a shoe assembly coupled to said guard.

14. The modular power tool of claim 12 wherein said gear case includes a pair of substantially symmetrical air flow passages each of which provides a vent passage in the respective left and right hand orientation.

15. The modular power tool of claim 14 wherein said air flow passages have substantially symmetrical fins and ribbing.

5 16. The modular power tool of claim 12 wherein said handle is a clam shell handle.

17. The modular power tool of claim 14 wherein said handle is adaptable to receive a power supply.

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19. The modular power tool of claim 12 wherein said motor further includes a flange for coupling to said handle.

15 20. The modular power tool of claim 12 wherein said motor housing further includes a flange for coupling to said handle.

20 21. The modular power tool of claim 12 wherein said motor housing is symmetrical.

22. The modular power tool of claim 12 wherein said motor, said gear case, said handle, said guard assembly and said housing are connected by a plurality of common fasteners.

25 23. A method for assembling a modular power tool, comprising:
inserting a drive system through a cavity in a symmetrical handle
such that said drive system is supported through said cavity;
fastening a drive housing to said symmetrical handle;
wherein, said drive housing, said symmetrical handle, and said
30 drive system are coupled with a plurality of common fasteners.

24. The method of claim 23 further including:
fastening a guard assembly to said drive housing.

25. The method of claim 23 wherein said drive system includes:
a motor; and
a gear case coupled to said motor.

5 26. The method of claim 25 wherein said gear case includes a pair of substantially symmetrical air flow passages, said air flow passages have substantially symmetrical fins and ribbing.

10 27. The method of claim 23 further comprising the step of mounting a battery to said handle.

28. The method of claim 23 wherein said handle is a clam shell handle.

15 29. The method of claim 23 wherein said drive system further includes a flange for coupling to said handle.

30. The method of claim 23 wherein said drive housing further includes a flange for coupling to said handle.

20 31. The method of claim 23 wherein said drive housing is symmetrical.

32. The method of claim 24 wherein said guard assembly includes a guard and a shoe assembly coupled to said guard.

25 33. A modular power tool kit, comprising:
a plurality of different sized motors each including a mounting flange portion having a common mounting hole pattern;
a gear case adapted to couple to each of said plurality of different sized motors;
30 a handle having a motor opening adapted to receive each of said plurality of different sized motors therein;
a left hand guard assembly and right hand guard assembly each adapted to be mounted to said gear case; and

wherein said handle, said gear case and said plurality of different sized motors couple to said left and right hand guard assemblies in both a left and right hand configuration.

5 34. The kit of claim 33 wherein said gear case has a pair of substantially symmetrical air flow passages which enables said gear case to provide ventilation in both a left hand and right hand configuration.

10 35. The kit of claim 34 wherein said air flow passages have substantially symmetrical fins and ribbing.

36. The kit of claim 33 further comprising a battery adapted to be mounted to said handle.

15 37. The kit of claim 33 wherein said handle is a clam shell handle.

38. The kit of claim 33 further including a motor housing, including a flange for coupling to said handle.

20 39. The kit of claim 38 wherein said motor housing is symmetrical.

40. The kit of claim 33 wherein said left and right hand guard assemblies each include a saw guard and a saw shoe assembly coupled to said saw guard.

25 41. The kit of claim 33 wherein said plurality of different sized motors, said gear case, said handle, and said left and right hand guard assemblies are adapted to be connected by a plurality of common fasteners.

42. A modular power tool kit, comprising;
a plurality of different sized motors each including a mounting
flange portion having a common mounting hole pattern;
a gear case adapted to couple to each of said plurality of different
5 sized motors;
a handle having a motor opening adapted to receive each of said
plurality of different sized motors therein;
a guard assembly adapted to be mounted to said gear case; and
wherein said handle, said gear case and said plurality of different
10 sized motors couple to said guard assembly.

43. A modular power tool kit, comprising;
a motor;
a gear case adapted to be mounted to said motor;
15 a handle having a motor opening adapted to receive said motor
therein, said handle including a first side and a second side with said motor
opening extending from said first side through said second side;
a left hand guard assembly and right hand guard assembly each
adapted to be mounted to said gear case; and
20 wherein said handle, said gear case and said motor couple to said
left and right hand guard assemblies in both a left and right hand configuration,
wherein in said left hand configuration, said left hand guard assembly is mounted
to said first side of said handle in said right hand orientation, said right hand
guard assembly is mounted to said second side of said handle.